

ABSTRACT OF THE DISCLOSURE

The invention includes field effect transistors, integrated circuitry, methods of forming field effect transistor gates, and methods of forming integrated circuitry. In one implementation, a field effect transistor includes a pair of source/drain regions having a channel region positioned therebetween. A gate is positioned operatively proximate the channel region, and includes conductively doped semiconductive material, a silicide layer and a conductive diffusion barrier layer. In another implementation, integrated circuitry comprises a field effect transistor having a gate, a gate dielectric layer, source/drain regions and a channel region. The gate comprises semiconductive material conductively doped with a conductivity enhancing impurity of a first type and a conductive diffusion barrier layer. Insulative material is provided proximate the gate, and includes semiconductive material therein which is in electrical connection with the gate. Such semiconductive material is conductively doped with a conductivity enhancing impurity of a second type. The conductive diffusion barrier layer of the gate is provided between the gate semiconductive material and the semiconductive material provided within the insulative material. A method of forming a field effect transistor gate includes forming a layer of conductively doped semiconductive material over a substrate, forming a layer of a conductive silicide over the substrate, and forming a conductive diffusion barrier layer over the substrate. Portions of the semiconductive material layer, the silicide layer and the conductive diffusion barrier layer are

1 removed to form a transistor gate comprising the semiconductive
2 material, the conductive silicide and the conductive diffusion barrier
3 layer.
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